AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A subscriber for a communication system for transmitting and receiving data telegrams, wherein each of the data telegrams has reference data and an identifier, wherein a control of transmitting and receiving the data telegrams is based on check data records~~, wherein a respective one of the check data records has an address for the reference data and the identifier of a respective one of the data telegrams that is assigned to the respective one of the check data records~~, the subscriber comprising:

a transmission list, which includes a first number of the check data records, where each of the check data records has an address for the reference data and the identifier which uniquely identifies a respective one of the data telegrams that is assigned to the respective one of the check data records;

a circuit unit configured to generate one of the data telegrams to be transmitted, based on one of the first number of check data records in the transmission list;

a second number of the check data records;

an assignment unit configured to assign a received data telegram to one of the second number of the check data records, wherein the assignment is based on the identifier of the received data telegram.

2. (original): The subscriber as claimed in claim 1, wherein the communication system comprises at least one of an Ethernet and a real-time Ethernet.

3. (original): The subscriber as claimed in claim 1, wherein the transmission list is processed within a cycle.

4. (original): The subscriber as claimed in claim 1, wherein the transmission list has at least one control data record, which determines the order of processing the first number of the check data records.

5. (original): The subscriber as claimed in claim 4, wherein the control data record includes a conditional jump address to a check data record of the first number of the check data records.

6. (original): The subscriber as claimed in claim 5, further comprising a cycle counter, wherein the control data record is formed such that a jump to the jump address occurs in every nth cycle.

7. (original): The subscriber as claimed in claim 6, wherein the control data record is in a form such that the nth cycle is chosen by masking bit positions of a cycle number.

8. (original): The subscriber as claimed in claim 1,

wherein check data records of the second number of the check data records are stored in groups;

wherein access to a check data record is effected by an index; and

wherein a group of the check data record is determined based on the identifier of the received data telegram.

9. (currently amended): A communication system having a plurality of subscribers for transmitting and receiving data telegrams,

wherein each of the data telegrams has reference data and an identifier;

wherein a control of transmitting and receiving the data telegrams by at least one of the subscribers is based on check data records;

wherein ~~a respective one~~ each of the check data records has an address for the reference data and the identifier ~~of~~ which uniquely identifies a respective one of the data telegrams that is assigned to the respective one of the check data records; and

wherein the at least one subscriber comprises:

a transmission list, which includes a first number of the check data records;

a circuit unit configured to generate one of the data telegrams to be transmitted, based on one of the first number of check data records in the transmission list;

a second number of the check data records; and

an assignment unit configured to assign a received data telegram to one of the second number of the check data records, wherein the assignment is based on the identifier of the received data telegram.

10. (original): The communication system as claimed in claim 9, wherein the communication system comprises at least one of an Ethernet and real-time Ethernet.

11. (original): The communication system as claimed in claim 9, wherein the transmission list is processed within a cycle.

12. (original): The communication system as claimed in claim 9, wherein the transmission list has at least one control data record, which determines the order of processing the first number of the check data records.

13. (original): The communication system as claimed in claim 12, where the control data record includes a conditional jump address to a check data record of the first number of the check data records.

14. (original): The communication system as claimed in claim 13, further comprising a cycle counter, wherein the control data record is formed such that a jump to the jump address occurs in every nth cycle.

15. (original): The communication system as claimed in claim 14, wherein the control data record is in a form such that the nth cycle is chosen by masking bit positions of a cycle number.

16. (original): The communication system as claimed in claim 9,

wherein check data records of the second number of the check data records are stored in groups;

wherein access to a check data record is effected by an index; and

wherein a group of the check data record is determined based on the identifier of the received data telegram.

17. (currently amended): A method for transmitting and receiving data telegrams by a subscriber of a communication system, wherein each of the data telegrams has reference data and an identifier, wherein a control of transmitting and receiving the data telegrams by the subscriber is based on check data records, ~~wherein a respective one of the check data records has an address for the reference data and the identifier of a respective one of the data telegrams that is assigned to the respective one of the check data records~~, the method comprising:

generating one of the data telegrams to be transmitted, based on one of a first number of the check data records of a transmission list, where each of the check data records has an address for the reference data and the identifier which uniquely identifies a respective one of the data telegrams that is assigned to the respective one of the check data records; and

assigning a received data telegram to one of a second number of the check data records, wherein the assignment is based on the identifier of the received data telegram.

18. (original): The method as claimed in claim 17, wherein the transmission list is processed within a cycle.

19. (original): The method as claimed in claim 17, wherein the order of processing the first number of the check data records is determined by at least one control data record in the transmission list.

20. (original): The method as claimed in claim 17, wherein a conditional jump to a check data record of the first number of the check data records occurs when a condition for the check data record is satisfied.

21. (original): The method as claimed in claim 20, further comprising checking for satisfaction of the condition based on a cycle counter.

22. (original): The method as claimed in claim 17,

wherein, for accessing a check data record from the second number of the check data records, an index is accessed in order to ascertain a group, to which the check data record belongs; and

wherein the index is formed on the basis of the identifiers of the data telegrams.

23. (new): The subscriber as claimed in claim 1, wherein:

the identifier of a corresponding check data record is a globally unique identifier corresponding to only one data telegram,

the second number of the check data records is grouped such that the received data telegram is first matched with a corresponding group of the check data record based on least significant bits in the identifier of the received data telegram and only then with a corresponding unique record based on the identifier,

each of the check data records is an application frame control word, and

the transmission list is sequentially processed by sequentially generating data telegrams for each of the check data records in the transmission list.